

ABSTRACT

Combined Digital-Analog Signal Processors, Waveforms with Time Constrained Signal (TCS) response and Long Response (LR) filtered Bit Rate Agile (BRA) Modulation-Demodulation (Modem) Format Selectable (MFS) and Code Selectable (CS) system implementations for Interoperable Multiple Standard Enhanced GSM, CSMA, TDMA, OFDM, and third-generation CDMA, W-CDMA and B-CDMA systems and associated methods. Systems include Feher's Gaussian Minimum Shift Keying (GMSK or FGMSK) and Feher's Quadrature Phase Shift Keying (FQPSK) systems combined with Adaptive Antenna Arrays (AAA), Pseudo-Error (PE) based Non-Redundant Error Detection (NRED) controlled IF adaptive equalizers, smart antenna and smart diversity systems which have spectral/RF power efficiency and enhanced end-to-end performance.